

PART 5.RECOMMENDED PLAN

Based on input from a series of Stakeholder Meetings as well as input received during the Laveen ADMP Public Meeting #4, (Figure 5-1) the recommended plan for Laveen was developed. The plan takes into account the most favorable components of the previous alternatives and incorporates them into a feasible design that will provide flood protection, multiple use opportunities, and is acceptable to the Laveen residents.



Figure 5-1: Laveen Public Meeting #4

Individual Stakeholder meetings were held with representatives from City of Phoenix, Flood Control District of Maricopa County, and citizen groups residing in Laveen on separate occasions. The most influential criteria resulting from the meetings were “Acceptability to Local Residents” and “Multiple-use Opportunities”. All other criteria were still viewed as important, but it was these two factors that would determine whether the recommended plan would be acceptable.

The alternative that provided for the greatest amount of multiple-use opportunities was Alternative 2A. In order to make this alternative more appealing to residents and meet the criterion of acceptability, it was necessary to modify it and incorporate elements of the other two alternatives. The recommended plan, thus evolved from the existing Alternatives 2A, 4, and 6.

At the fourth Public Meeting, held on October 1, 2001, the recommended plan was presented to the public. An overview of the ADMP process and how the plan was developed was presented at a formal presentation. Participants were allowed to ask questions and provide suggestions or feedback based on their experiences and concerns. During the meeting, some comments were addressed regarding location of certain features presented in the plan and how those would affect existing properties. It was pointed out that the recommended plan does not specify concrete locations and that as part of the next step, and the design process, specific locations and alignments would have to be carefully evaluated and identified.

The recommended plan consists of a combined system of detention basins, channels, and storm drains. The features of the recommended plan include:

- Detention basins will located along 51<sup>st</sup> Avenue on Baseline, Dobbins, and Elliot Roads. Additional basins will be located near the Cheatum property at 49<sup>th</sup> Avenue and Elliot Road, at 43<sup>rd</sup> Avenue and Dobbins Road, and at 44<sup>th</sup> Avenue and Carver Road.
- Multiple-use channels along SRP’s existing Western Canal and along 67<sup>th</sup> Avenue from Vineyard Avenue to the Laveen Area Conveyance Channel.
- Storm drains located along Elliot Road from 49<sup>th</sup> Ave to 51<sup>st</sup> Avenue, along 51<sup>st</sup> Avenue connecting the proposed detention basins, and along Baseline Road from the 51<sup>st</sup> Avenue basin to the Laveen Area Conveyance Channel, and a storm drain from Carver Road Basin south to Estrella Drive.

By combining these elements, the recommended plan will achieve specific goals identified throughout the ADMP process. The particular goals achieved by this plan are:

- Implementation of the 51<sup>st</sup> Avenue Scenic Drive concept of the Southwest Growth Study.
- Implementation of the General Plan Laveen Trails.
- Incorporation of additional opportunities for development of city parks through the use of detention basins.

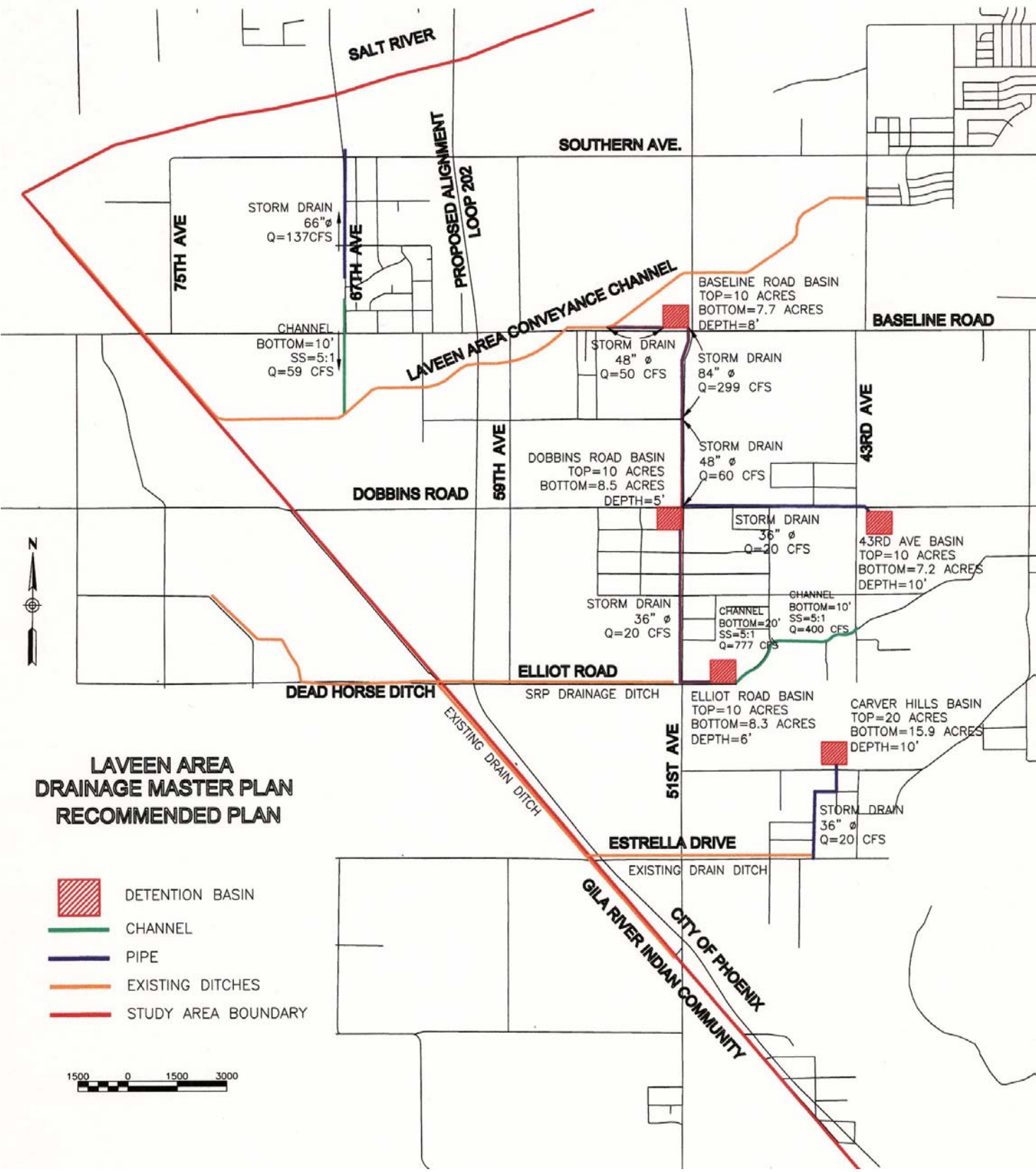


Figure 5-2: Recommended Plan



- The addition of a trailhead connecting the Rio Salado project at 67<sup>th</sup> Avenue.
- Connections of the trail system planned along the Laveen Area Conveyance Channel.
- Alignment of trails, to the greatest extent possible, with existing or planned rights-of-way.

### ESTIMATED COST

The engineer’s estimated cost of the Recommended Plan is shown in Table 16. It is important to note that a 30% contingency is included in the estimate, to allow for unknown items.

### ENGINEERING CONSIDERATIONS

The cost for this alternative is approximately \$22 million. Detailed description of each feature is provided in Table 16.

The detention basin located at the intersection of 43<sup>rd</sup> Avenue and Dobbins has a top area of 10 acres, a bottom area of 7.2 acres, and is 10 feet deep with 5:1 side slopes. This basin will have a metered outflow, not exceeding 20 cfs, to a storm drain in Dobbins Road. The storm drain running from 43<sup>rd</sup> Avenue to 51<sup>st</sup> Avenue will have an inside diameter of 36 inches. It will discharge to a detention basin at 51<sup>st</sup> Avenue and Dobbins. This detention basin has a top area of 10 acres and a 8.5-acre bottom area. It is 5 feet deep with 5:1 side slopes.

Another detention basin is located west of the intersection of Elliot Road and 49<sup>th</sup> Avenue. A channel along the SRP lateral is used as a collector facility and outlets to this detention basin. The basin has a 10-acre top area and an 8.3-acre bottom area. It is 6 feet deep with 5:1 side slopes. The channel that feeds into the basin has a 20-foot wide bottom and 5:1 side slopes. It will have the capacity to carry 777 cfs and flows at a depth of 4.2 feet. The detention basin will connect to the detention basin at 51<sup>st</sup> Avenue and Dobbins by way of a storm drain with an inside diameter of 36 inches. The storm drain will have a metered flow rate of 20 cfs.

Flows outfalling the detention basin at 51<sup>st</sup> Avenue and Dobbins will be conveyed north to detention basin at 51<sup>st</sup> Avenue and Baseline Road. The storm drain connecting the two detention basins will initially have an inside diameter of 48 inches and have a capacity of 60 cfs. At South Mountain Boulevard, the storm drain changes size to 84 inches diameter and has a capacity of 299 cfs.

The detention basin at 51<sup>st</sup> Avenue and Baseline Road will have a top area of 10 acres and a 7.7-acre bottom. It will be 8 feet deep with 5:1 side slopes. This detention basin will be located approximately one-half mile east of the Laveen Area Conveyance Channel and will ultimately outfall to that facility. The outfall will be metered by a 48 inch inside diameter storm drain.

Flows that currently collect and inundate 67<sup>th</sup> Avenue will be directed away by two separate facilities. A drainage channel will flow south, parallel to 67<sup>th</sup> Avenue, and a storm drain will flow north to the Salt River. The 67<sup>th</sup> Avenue Channel will flow from Vineyard Avenue and ultimately outflow to the Laveen Area Conveyance Channel. The channel will have a bottom width of 10 feet and side slopes of 5:1. The channel will flow at a depth of 1.7 feet and have a capacity of 59 cfs. The 66-inch storm drain will begin just north of Vineyard Avenue and will flow at a rate of 137 cfs.

A 20-acre detention basin will be located on the north side of Carver Road, near 44<sup>th</sup> Avenue, to collect flows at that point. The basin will have a top area of 20 acres and be approximately 10 feet deep. The basin will outlet south to 47<sup>th</sup> Avenue and Estrella Drive in a storm drain 36 inches in diameter at a flow rate of 20 cfs. The storm drain outfalls to an existing SRP drainage ditch that heads directly west along Estrella Drive.

### ENVIRONMENTAL CONSIDERATIONS

Additional archaeological surveys of the area will be expected with the implementation of the recommended plan. As discussed in Section 2, approximately 23% of the study area has been evaluated in recent, intense archaeological research. Based on these previous surveys, a diverse range of cultural resources, from prehistoric villages and canals to historic buildings and roads, are located within the Laveen ADMP project area.

Because of the mostly agricultural nature of activity in the area, there is a relatively small concentration of potential hazardous material sites throughout any of the alternatives. Underground storage tanks are located at several of the major intersections throughout the downtown Laveen area. Only one leaking underground storage

tank is located in an area that may conflict with the recommended plan at 51<sup>st</sup> Avenue and Dobbins Road.

The project is not anticipated to have a disproportionately high or adverse impact on low-income or minority populations. Locations of the basins were determined by creating the best solution based on current, past, and future flooding problems. This project is expected to benefit Laveen residents by providing increased flood protection to the area -and increasing recreational opportunities by providing multi-use paths. The recommended plan provides for large open spaces in the system of detention basins. A portion of the basins may be designed to promote wildlife, either by serving as habitat or interpretive centers. The connectivity achieved by the trail systems may provide for wildlife corridors and connections between the South Mountain Park and Salt River ecosystems.

### MULTI-USE OPPORTUNITIES

Four landscape character areas were identified in the Master Plan: Natural, Transitional, Agricultural and Urban. The proposed Master Plan (Figure 5-4) includes trails and detention basins that could be incorporated into park sites in all of these areas. Prototypical design for these features is described below. To meet the City of Phoenix minimum size criteria for neighborhood parks, these facilities will be augmented by tot lots, open play areas and parking.

The recommendation includes trails within the Drainage Master Plan pipe easements along 51<sup>st</sup> Avenue, Dobbins Road and trails along the drainage channel recommended along 67<sup>th</sup> Avenue (Figure 5-3).

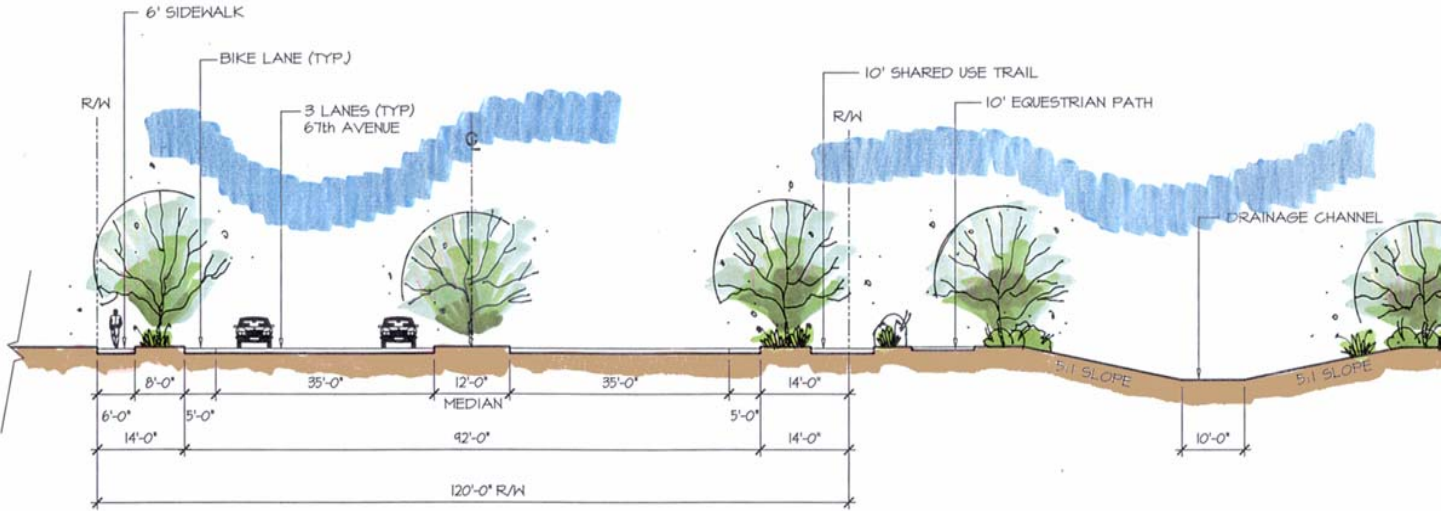


Figure 5-3: 67<sup>th</sup> Avenue Channel Cross-section



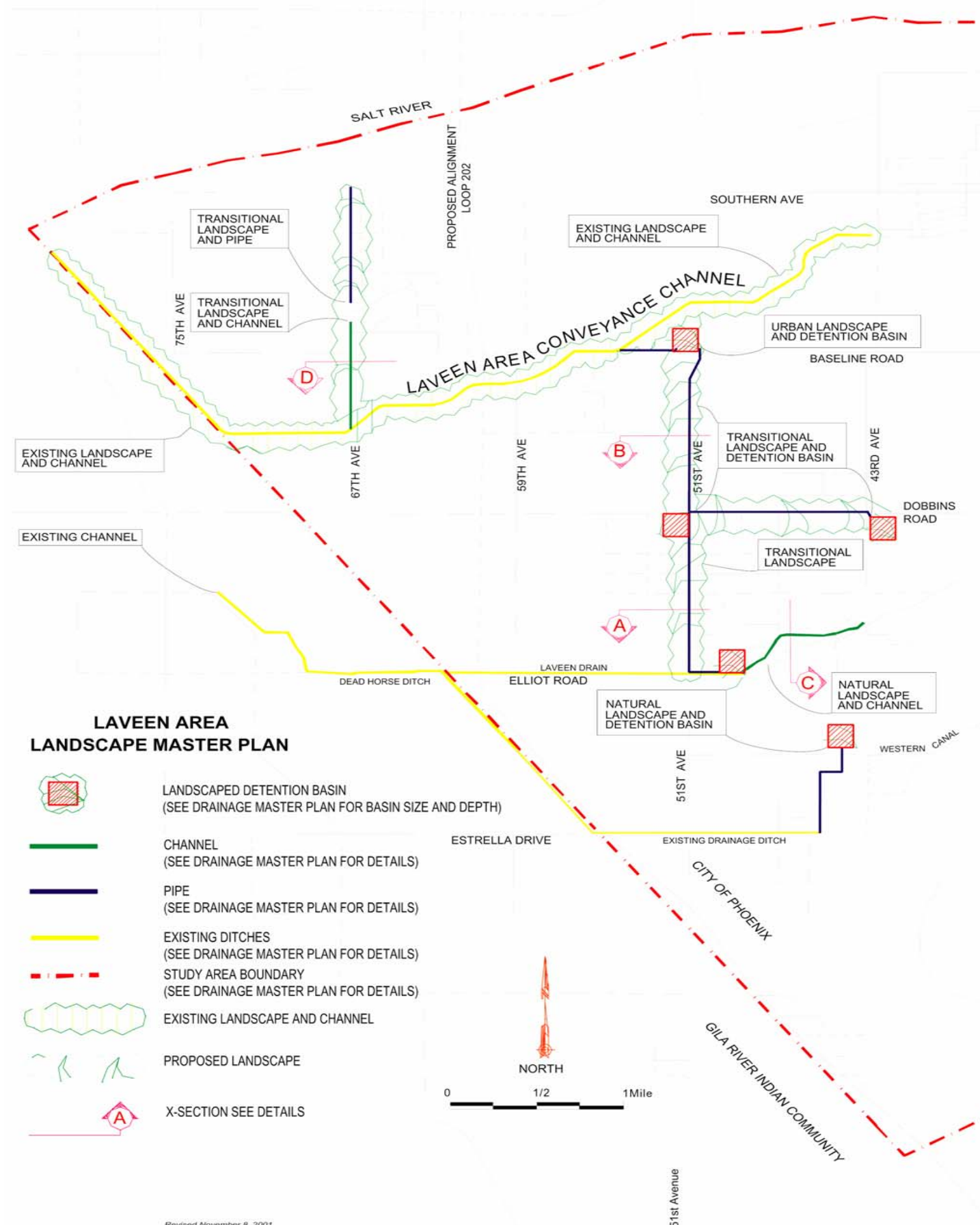


Figure 5-4: Recommended Landscape Master Plan

## URBAN LANDSCAPE

The urban landscapes in Laveen are mostly within the developed areas and include new and older subdivisions. Portions of the 51<sup>st</sup> Avenue Trail and two ten-acre detention basis are proposed within this landscape character area. To reflect the urban character of the area, the detention basin facilities could include developed play areas or sports field, surrounded by shaded areas and ramadas. A shared use trail could be provided to access the basin.

Through the use of indigenous and non-indigenous plants (see plant list on basin landscape plan sheet) and native inert surface treatment in the detention basin an “Urban Park” approach was developed. The cross slope and edges of the basin should be varied to aid in a softer feel to the site. A natural wash was also introduced into the bottom of the basin to help soften the geometric shape of the basin and also to help convey nuisance water. A turfed sports field area was also introduced into the basin for more active play activities. In the upper reach an open play turfed area and tot lot will be added to introduce more active recreation amenities into the park. A 6-foot shared-use trail will also loop throughout the site and provide a connection to the parking lot/ trailhead. The parking lot/ trailhead will also tie into the shared-use trail and equestrian path that parallels 51<sup>st</sup> Avenue and Baseline Road. Ramada’s, area lights and other amenities will be provided to aid in the users experience and comfort.



Figure 5-5: Urban Landscape Character Theme basin at 51<sup>st</sup> Avenue and Baseline



The pipe easement along 51<sup>st</sup> Avenue, which the plan recommends be maintained for a trail, also reflects an urban landscape character design. The 51<sup>st</sup> Avenue Trail includes a minimum width of ten feet and landscaping compatible with surrounding development.

**Transitional Landscape**



Figure 5-6: Transitional Landscape Character Theme basin at 51<sup>st</sup> Avenue and Dobbins Road

The Transition area is generally located north of Southern Avenue, and includes the privately owned golf course between Southern Avenue and Baseline Road. The plan recommends a retention basin at the southwest corner of Dobbins and 51<sup>st</sup> Avenue. While the basin is within the urban area, it’s location at the juncture of the storm drain on Dobbins Road and the pipe along 51<sup>st</sup> avenue provides an opportunity to offer a natural wash feature that could be active during small storms. Consequently, the design for this basin was developed using the transitional theme. Through the use of indigenous and non-indigenous plants (see plant list on basin landscape plan sheet) and native inert surface treatment in the detention basin a “Transitional Park” approach was developed.

The cross slope and edges of the basin should be varied to aid in a more “natural” feel to the site. A natural wash was also introduced into the bottom of the basin to help soften the geometric shape of the basin and also to help convey nuisance water. A turf open play area was also introduced into the basin for more passive play activities. In the upper reach an open play turf area and tot lot will be added to introduce more active recreation amenities into the park. A 6-foot shared-use trail will also loop throughout the site and provide a connection to the parking lot/ trailhead. The parking lot/ trailhead will also tie into the shared-use trail and equestrian path that parallels 51<sup>st</sup> Avenue. The 6-foot shared-use trail loop also ties into the Dobbins Road on street trail system that terminates at the new proposed Laveen Town Center. Ramada’s, area lights and other amenities will be provided to aid in the users experience and comfort.

**Natural Desert Landscape**

The Natural Desert Area is recommended for the areas around South Mountain and Carver Hills. The plan proposes a basin at the Western Canal and Elliot Road. The design of this basin is intended to reflect the natural character of the undeveloped desert.



Figure 5-7: Natural Landscape Character Theme Basin at 47<sup>th</sup> Avenue and Elliot Road

Through the use of indigenous plant material (see plant list on basin landscape plan sheet) and native inert surface treatment in the detention basin a “Natural Desert Park” approach was developed.

The cross slope and edges of the basin should be varied to aid in a more “natural” feel to the site. A natural wash was also introduced into the bottom of the basin to help soften the geometric shape of the basin and also to help convey nuisance water.

**RECOMMENDED PLAN IMPLEMENTATION**

Successful implementation of the Area Drainage Master Plan will result after completion of several important elements:.

- **ADOPT the Plan!** First, the plan must be adopted by the all the stakeholders, as well as by decision-makers at the FCDMC, and embraced as the logical solution to local flood control.
- **AGREE to Move Forward!** An understanding an agreement by the stakeholders to move the plan forward is key to successful implementation.
- **ALLOCATE the Funds!** Funding of both the FCDMC portion of the plan, as well as elements of the plan requiring funding by various departments within the City of Phoenix and Maricopa County, and possible developer contributions need to be identified and set aside as soon as possible to move the plan forward.
- **ACQUIRE the Land!** Land for detention basin/park sites, channel drainage easements adjacent to existing rights-of-way, etc., need to be acquired before vacant land is developed or otherwise obligated.
- **ADDRESS Critical Design Issues!** Many design elements need to be worked out in detail to achieve a successful plan. In particular, phasing of construction in order to coincide with street widening, utility construction, and other improvement projects will greatly affect the cost, and therefore the success, of the plan.

It is imperative that the plan is well received and accepted by the major stakeholders early on. This will help expedite the process of securing the resources as they become available. Land acquisitions, purchase of parcels, shared easements, and even condemnations are a few of the ways that the FCDMC may begin to move forward with the implementation of the ADMP.

These decisions early on will reduce conflicts with developers, individual landowners and other important stakeholders as time progresses. In addition, by publishing and creating a document that sets aside the needed land for flood control, multiple entities can become aware and incorporate their plans to this ADMP, therefore facilitating partnering and cost sharing among various groups.